WM-F31/F41/F41SS

SERVICE MANUAL

Refer to SRS-3 Service Manual issued previously for information of speaker system supplied with WM-F41SS.

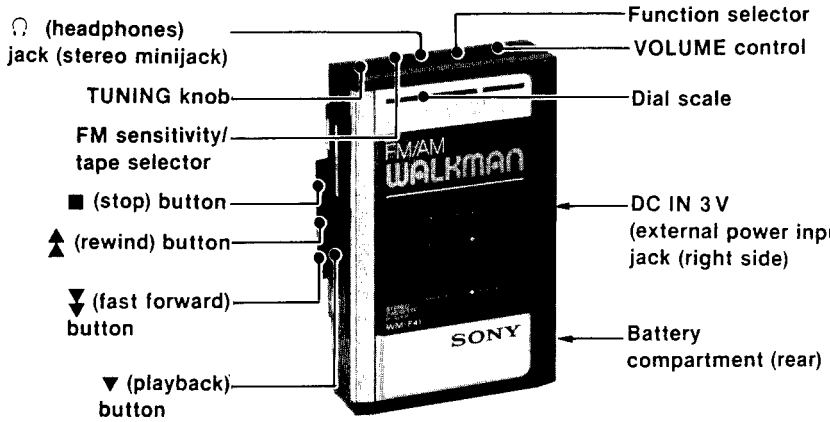


PHOTO: WM-F41

WM-F31
UK Model
E Model
AEP Model

WM-F41
US Model
Canadian Model

WM-F41SS
Canadian Model

AK 17

SPECIFICATIONS

Similar Mechanism Model	WM-31/31SS/41

Frequency range FM: 87.6–108 MHz
AM: 530–1,605 kHz

Antennas FM: Headphone cord antenna
AM: Built-in ferrite rod antenna

Frequency response
40–14,000 Hz (with the tape selector set to CrO_2/METAL)
40–14,000 Hz (with the tape selector set to NORMAL)

Power output 15 mW + 15 mW at DC operation
(at 10% harmonic distortion) load impedance 32 ohms

Power requirements
3 V DC, two size AA (IEC designation R6) batteries
External batteries (used in the optional EBP-500 battery case): two size D (IEC designation R20) batteries
DC IN 3 V jack accepts:
Sony AC-D2 AC power adaptor (optional)
Sony DCC-70 car battery cord (optional)

Battery life (hours)

Batteries	FM reception	Tape playback
Sony SUM-3(NS) New Super or Eveready No. 1015 Heavy Duty batteries	Approx. 17	Approx. 4.5
Sony Eveready AM3 alkaline or Eveready No. E91 alkaline batteries	Approx. 35	Approx. 9

For maximum performance we recommend the use of alkaline batteries.

Dimensions Approx. 88.1 × 132 × 34 mm (w/h/d)
(3½ × 5¼ × 1⅜ inches)
not incl. projecting parts and controls

Weight Approx. 240 g (8.5 oz) incl. batteries, not incl. other accessories

MICROFILM

FM/AM STEREO CASSETTE PLAYER

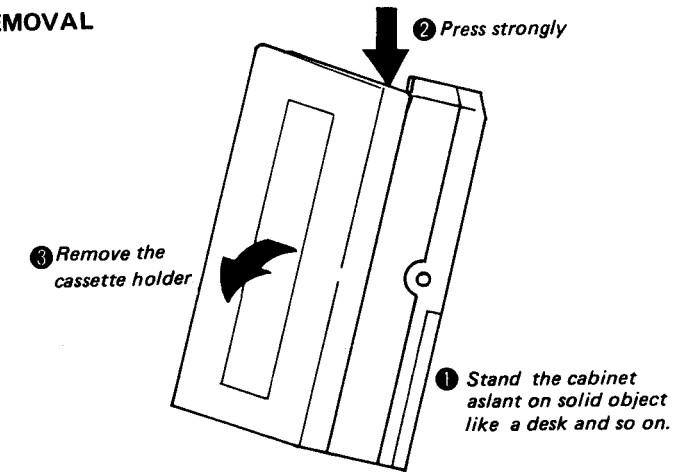
SONY®

TC

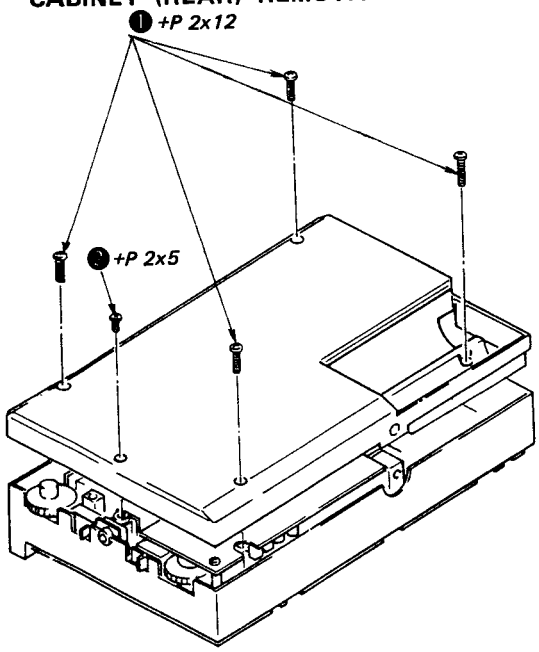
SECTION 1
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

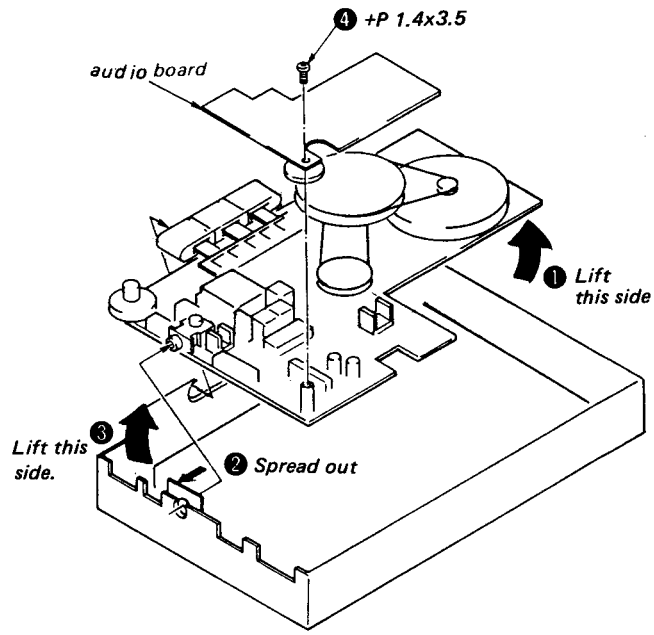
CASSETTE HOLDER REMOVAL



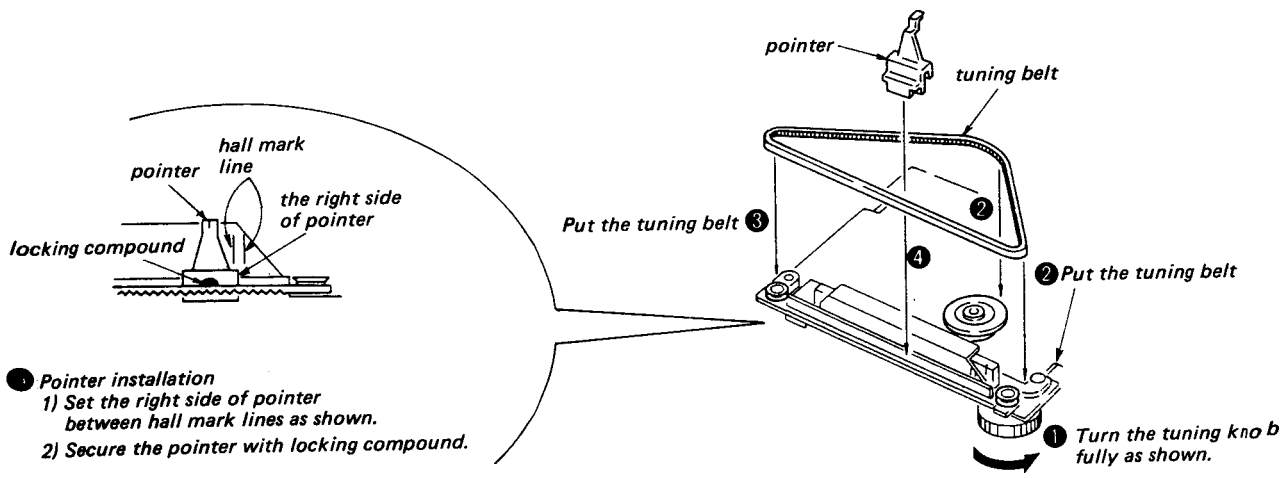
CABINET (REAR) REMOVAL



CIRCUIT BOARD & TRANSPORT MECHANISM REMOVAL



POINTER SETTING


pointer
tuning belt
hall mark line
pointer
the right side of pointer
locking compound
Put the tuning belt ❸
❷ Put the tuning belt
❶ Turn the tuning knob fully as shown.
❶ Pointer installation
1) Set the right side of pointer between hall mark lines as shown.
2) Secure the pointer with locking compound.

SECTION 2
ADJUSTMENTS

2.1 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   capstan
   rubber belts
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	22-45g•cm (0.31-0.63oz•inch)	CQ-102C
Fast Forward	55-150g•cm (0.77-2.1oz•inch)	CQ-201B
Rewind	55-150g•cm (0.77-2.1oz•inch)	CQ-201B
Back Tension	0.5–2 g•cm (0.007–0.03 oz•inch)	CQ-102C

Tape Tension Measurement

Meter	Meter Reading
CQ-403A	more than 120 g (4.3 oz)

2-2. ELECTRICAL ADJUSTMENTS

CASSETTE Section

Tape Speed Adjustment

Setting:

VOL control: mechanical mid

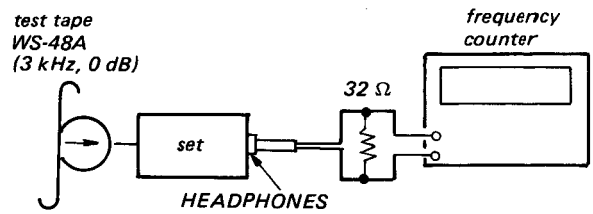
Procedure:

Mode: playback
Function: Tape

Specifications:

Digital frequency counter
2,985 – 3,015 Hz

Frequency difference between beginning and end tape should be within ± 1% (30 Hz). Adjust RV601

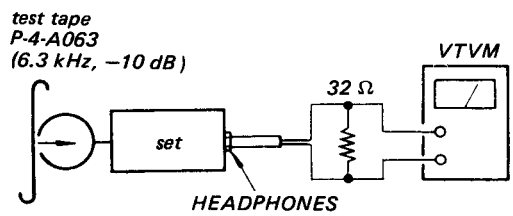


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2 dB.

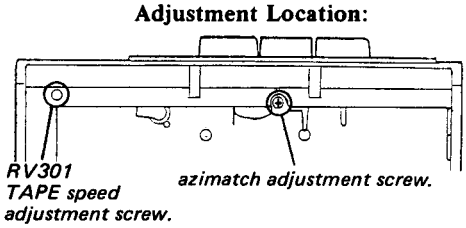
Playback Head Azimuth Adjustment

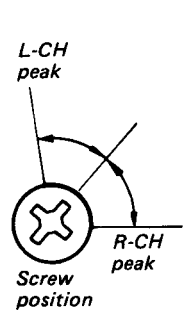
Procedure:

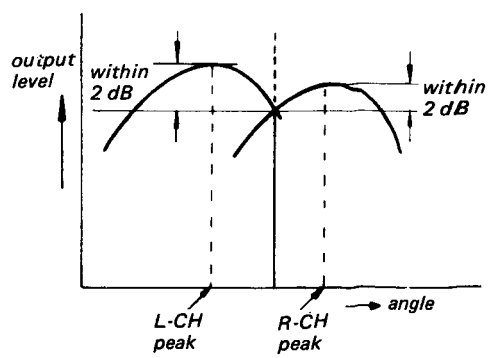
1. Mode: playback
   Function: tape



Adjustment Location:



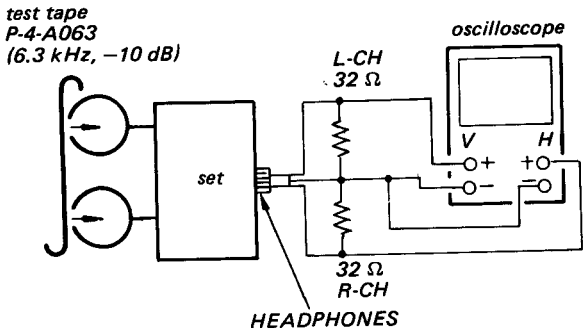


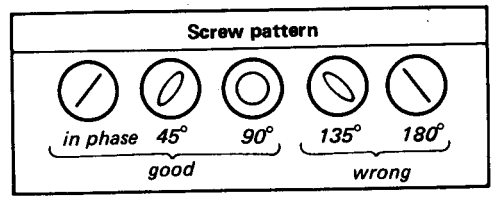


— Continued on page 4 —

3. Phase Check

Mode : playback
Function: tape

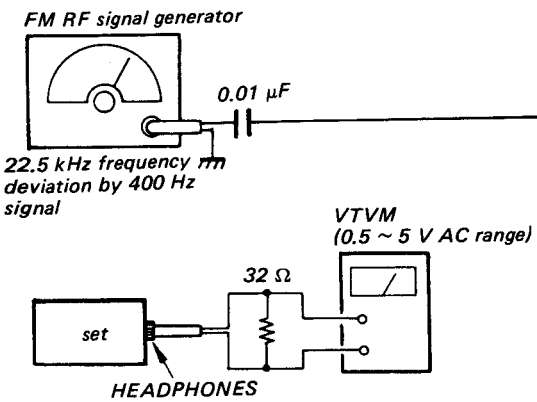


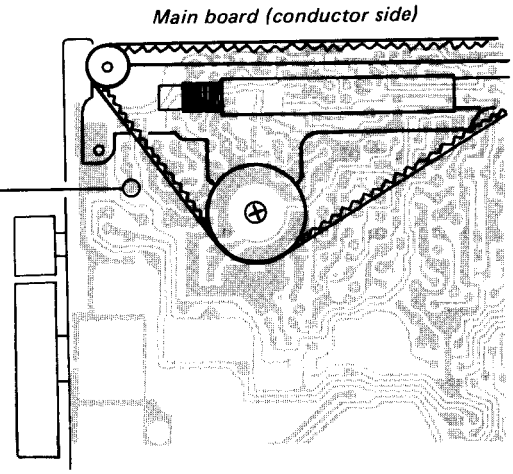


FM Section

Setting

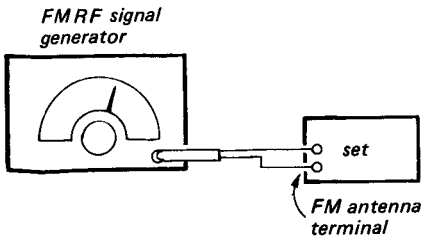
Function : FM
ATT. : LOCAL (WM-F41 only)



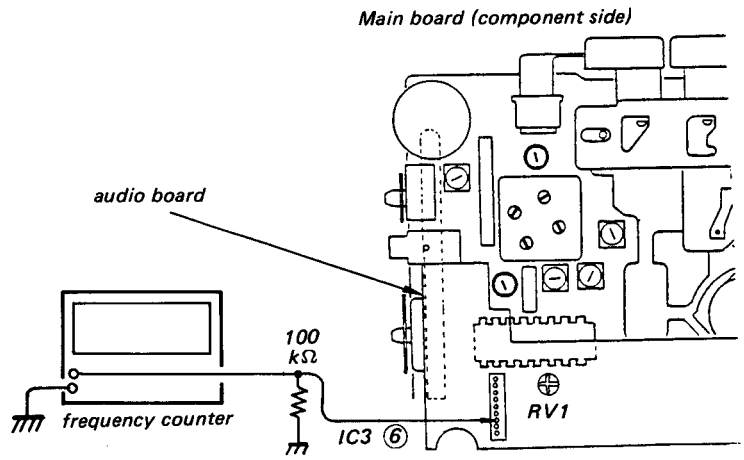


VCO Adjustment

Procedure:



Carrier frequency: 98 MHz
Modulation: 1 kHz deviation (30 %)



1. Tune the set to 98 MHz.
2. Adjust RV1 for 38 kHz ±200 Hz on the counter.

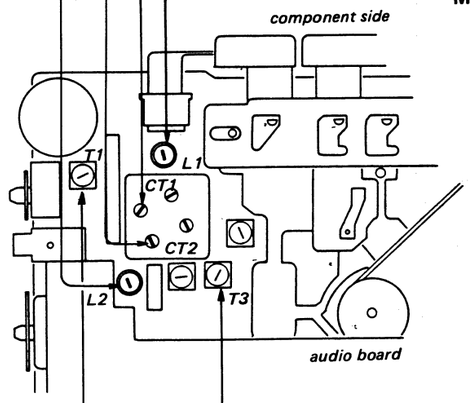
Adjustment Location

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
86.5 MHz	109.5 MHz
L2	CT1-2

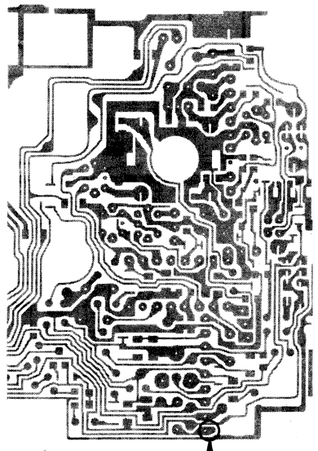
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
109.5 MHz	86.5 MHz
CT1-1	L1

Main board

component side

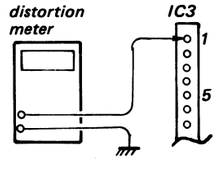


(conductor side)



T1	T3
Adjust for a maximum reading on VTVM.	
FM IF ALIGNMENT 1 (10.7 MHz with modulation)	

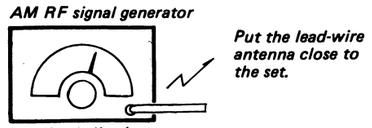
T3
Adjust for a minimum reading on distortion meter.
FM IF ALIGNMENT 2 (10.7 MHz with modulation)

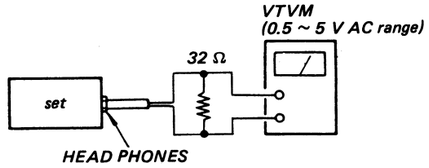


AM Section

Setting

Function: AM

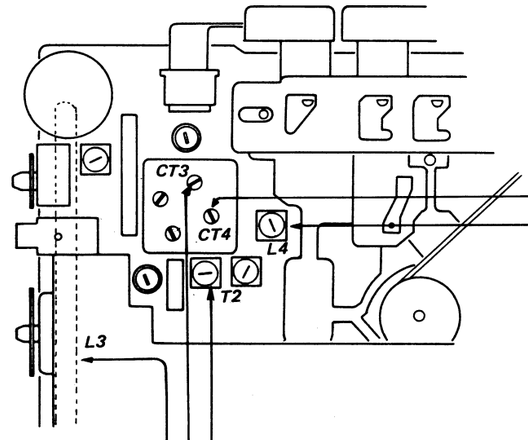




- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

Adjustment Location

Main board (component side)



AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT1-4	518 kHz
L4	1,680 kHz

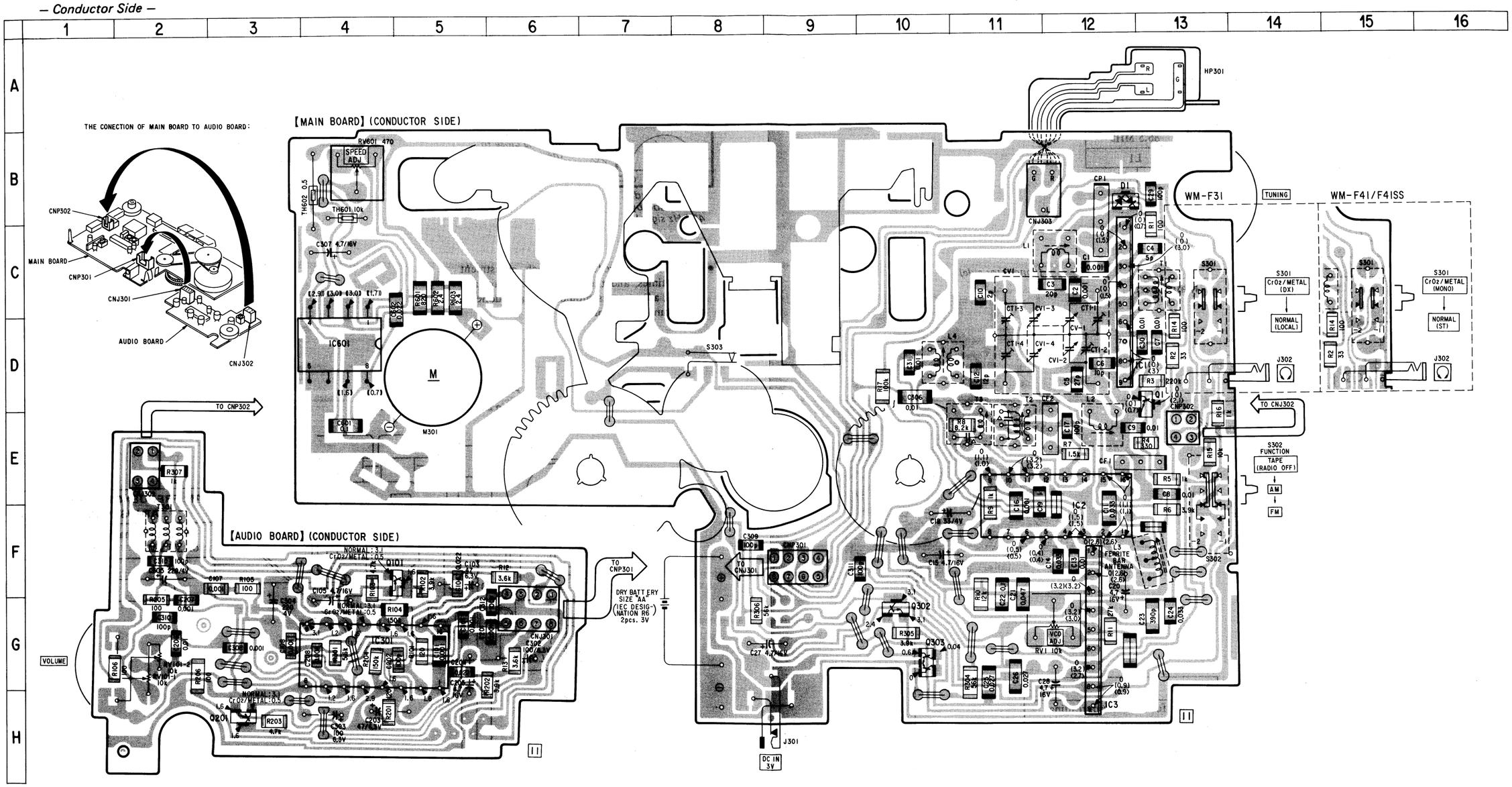
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
620 kHz	L3
1,400 kHz	CT1-3

AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
T2	455 kHz

SECTION 3
DIAGRAMS

3-1. MOUNTING DIAGRAM

– Conductor Side –

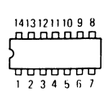


●SEMICONDUCTOR LOCATION

Ref.No.	Location	Ref.No.	Location
IC1	D-12	Q1	D-13
IC2	F-12	Q101	F-4
IC3	G-12	Q201	H-3
IC301	G-4	Q302	G-10
IC601	D-4	Q303	G-10
		D1	B-12

SEMICONDUCTOR LEAD LAYOUT

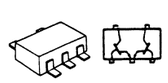
LA4570



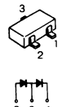
TA7358AP
TA7370P

DTA114TK
2SA1162
2SC2715

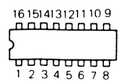
FMW1



1SS123



TA8110P

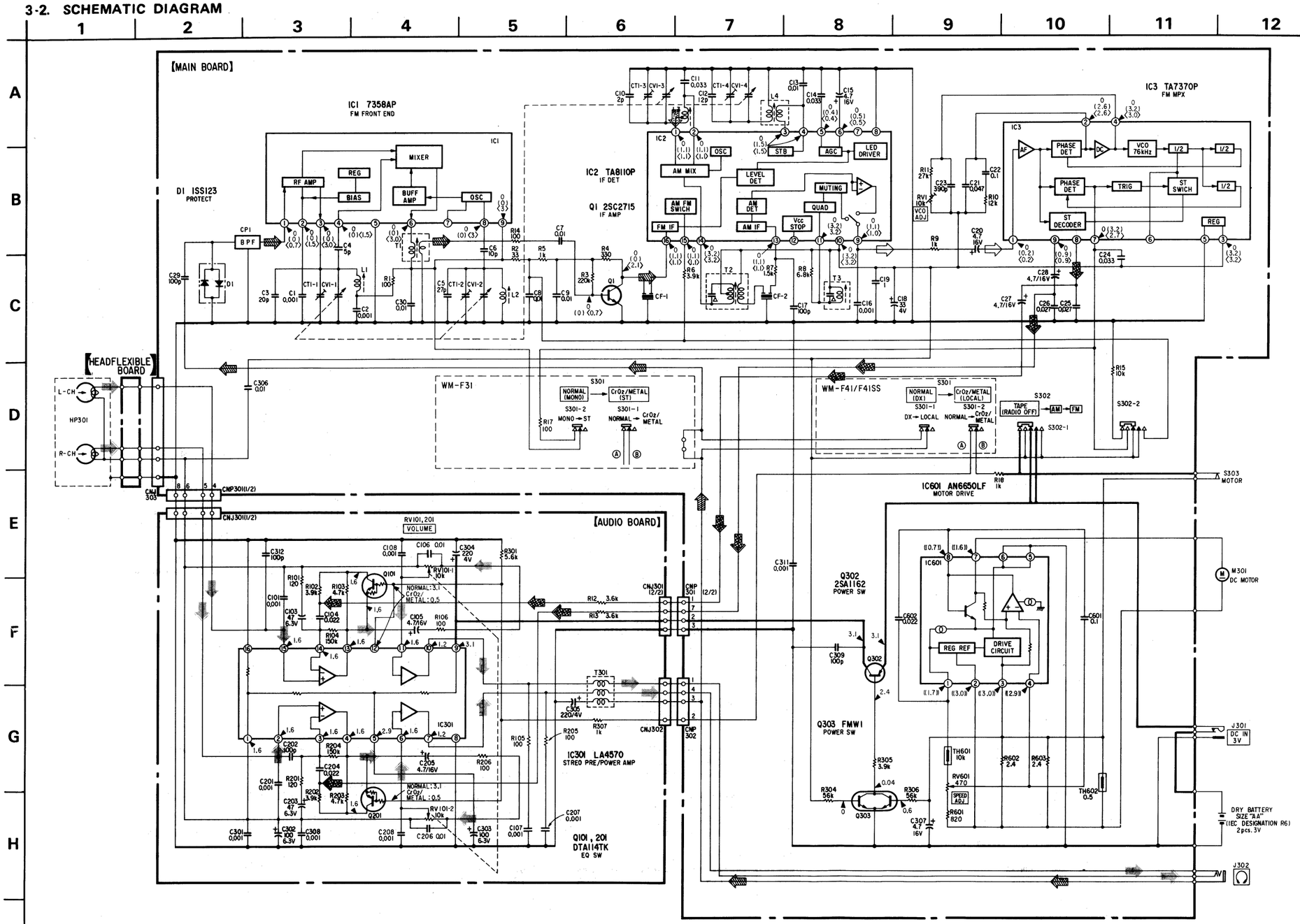


AN6650LF

Note:

- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- ▭ : chip parts
- ▭ : printing resistors.
- ⊂⊃ : printing jumper wires.
- This set equips "PRINTING RESISTOR" in the circuit. When repairing, replace "PRINTING RESISTOR" with conventional "CARBON RESISTOR" refer to the electrical parts list.
- ▭ : adjustment for repair.

3-2. SCHEMATIC DIAGRAM



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/64 W or less unless otherwise specified.
- △ : internal component.
- Switch

Ref. No.	Switch	Position
S301	TAPE, ATT (WM-F41)	NORMAL (DX)
S301	TAPE, ST/MONO (WM-F31)	NORMAL (STEREO)
S302	FUNCTION	TAPE
S303	MOTOR	OFF

- ▭ : adjustment for repair.
- Signal path
  - ➡ : TAPE (L-CH)
  - ➡ : TAPE (R-CH)
  - ➡ : FM RF
  - ➡ : AM RF
  - ⇨ : FM MPX
  - ➡ : FM (L-CH)
  - ➡ : FM (R-CH)
- ▬ : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (50 kΩ/V).
  - : TAPE
  - ( ) : AM
  - < > : FM
  - (( )) : TAPE (when botton is pressed)

WM-F31/F41/F41SS

SECTION 4
EXPLODED VIEW

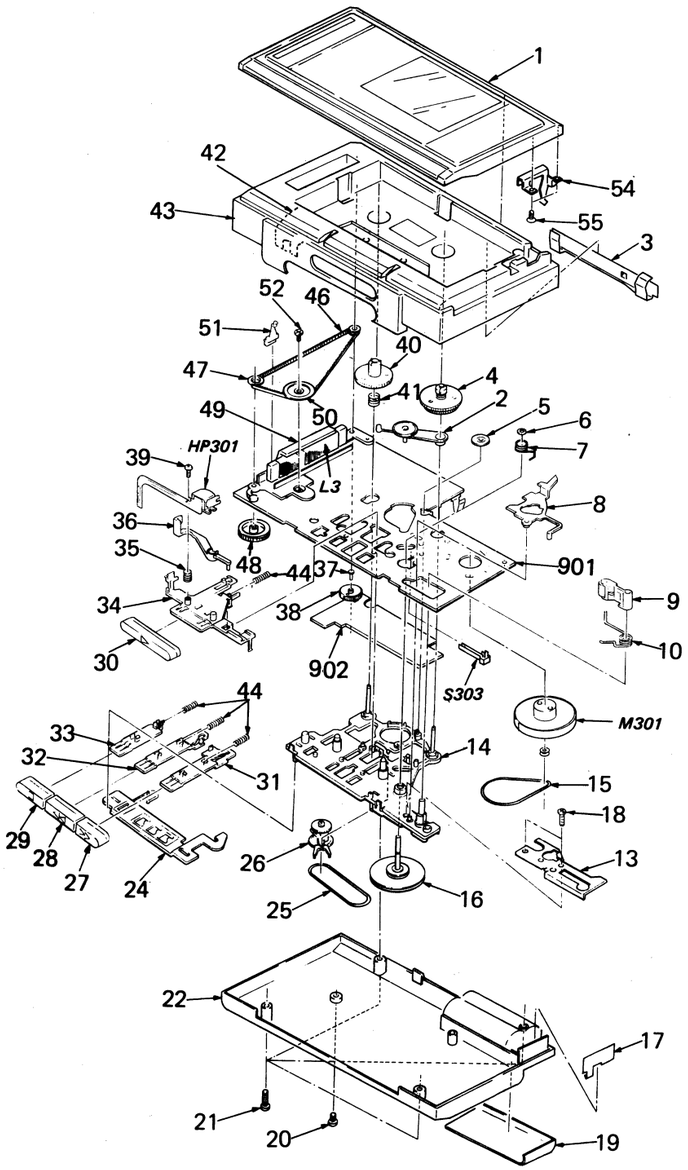
NOTE:
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...



No.	Part No.	Description	Remarks
1	3-334-076-01	(WM-F31:AE7.,E,UK/F41/F41SS) ...HOLDER CASSETTE (BLACK)	
	3-334-076-11	(WM-F31:AE7,E)...HOLDER CASSETTE (SILVER)	
	3-334-076-21	(WM-F31:AE7,E)...HOLDER CASSETTE (RED)	
	3-334-076-31	(WM-F31:AE7,E)...HOLDER CASSETTE (BLUE)	
	3-334-076-41	(WM-F31:G-AEP)...HOLDER CASSETTE (BLACK)	
	3-334-076-51	(WM-F31:G-AEP)...HOLDER CASSETTE (SILVER)	
2	X-3334-007-1	GEAR ASSY, PLAY	
3	3-334-058-01	SPRING, CASSETTE	
4	X-3334-006-1	TABLE ASSY, REEL, TAKE-UP	
5	3-334-089-01	GEAR, FF	
6	3-335-666-01	RING RETAINING	
7	3-336-705-01	SPRING, GROUND	
8	3-335-613-01	LEVER (A), SHUT-OFF	
9	X-3334-005-1	PINCH ROLLER ASSY	
10	3-335-608-01	SPRING	
13	3-335-667-01	SPACER, GUIDE	
14	*X-3334-019-1	BASE ASSY, GUIDE	
15	3-334-412-01	BELT, CAPSTAN	
16	X-3334-009-1	FLYWHEEL ASSY	
17	3-334-057-01	TERMINAL BOARD, RELAY	
18	3-894-748-01	SCREW (B1.4X2.5) TAPPING	
19	3-334-063-01	(WM-F31/F41/F41SS) ...LID, BATTERY CASE (BLACK)	
	3-334-063-11	(WM-F31:AE7,G-AEP,E) ....LID, BATTERY CASE (SILVER)	
	3-334-063-21	(WM-F31:AE7,E)...LID, BATTERY CASE (RED)	
	3-334-063-31	(WM-F31:AE7,E)...LID, BATTERY CASE (BLUE)	
20	3-335-641-01	SCREW +P2×5	
21	3-335-640-01	SCREW +P2×12	
22	X-3334-015-1	(BLACK)....CABINET (REAR)(CF)	
	X-3334-016-1	(SILVER)...CABINET (REAR)(CF)	
	X-3334-017-1	(RED).....CABINET (REAR)(CF)	
	X-3334-018-1	(BLUE).....CABINET (REAR)(CF)	
24	*3-335-618-01	PLATE, LOCK, BUTTON	
25	3-335-604-01	BELT, MIDWAY	
26	X-3334-008-1	GEAR ASSY, MIDWAY	
27	3-334-059-01	BUTTON, FF	
28	3-334-060-01	BUTTON, REW	
29	3-334-061-01	BUTTON, STOP	
30	3-334-062-01	BUTTON, PLAY	
31	3-335-611-01	LEVER, FF	
32	3-335-610-01	LEVER, REW	
33	3-335-609-01	LEVER, STOP	
34	3-334-080-01	CHASSIS, HEAD	
35	3-334-078-01	SPRING (AZIMUTH), COMPRESSION	
36	3-334-079-01	LEVER (B), SHUT-OFF	
37	7-627-850-57	SCREW,PRECISION +P 1.4X3.5	
38	3-334-068-01	KNOB (CF), VOL	
39	3-336-706-01	SCREW +PTT 2×5 IT3-C	
40	3-335-612-01	GEAR, SUPPLY REEL	
41	3-335-602-01	SPRING, COMPRESSION	
42	*3-335-637-01	PAPER, SHIELD, HEAD	
43	3-334-075-01	(WM-F31:EXCEPT G-AEP)....CABINET (CF)	
	3-334-075-11	(WM-F41:US).....CABINET (CF)	
	3-334-075-21	(WM-F41:Canadian/F41SS)..CABINET (CF)	
	3-334-075-61	(WM-F31:G-AEP)...CABINET (CF)	
44	3-335-605-01	SPRING, COMPRESSION	
45	3-527-213-00	LABEL, SERIAL NUMBER	
46	3-334-071-01	BELT, TUNING	
47	3-334-070-01	SHAFT, TUNING	
48	3-334-069-01	KNOB, TUNING	
49	X-3334-002-1	HOLDER, ASSY, TUNING	
50	*3-334-073-01	DRUM, DIAL	
51	3-334-072-01	POINTER	
54	3-335-661-01	STOPPER HOLDER	
55	3-318-382-01	SCREW (1.7X3), TAPPING	
901	A-3015-428-A	PC BOARD ASSY, MAIN	
902	A-3015-429-A	PC BOARD ASSY, AUDIO	
HP301	1-543-339-11	HEAD MAGNETIC (PLAY BACK)	
M301	8-835-186-01	MOTOR, DC	
S303	1-570-549-11	SWITCH LEAF (MOTOR)	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
901	*A-3015-428-A	PC BOARD ASSY, MAIN			
902	*A-3015-429-A	PC BOARD ASSY, AUDIO			
C1	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C2	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C3	1-163-100-00	CERAMIC CHIP	20PF	5%	50V
	1-163-103-00	(G-AEP ONLY)...CERAMIC CHIP	27PF	5%	50V
C4	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V
C5	1-163-363-91	CERAMIC CHIP	27PF	5%	50V
C5	1-163-364-00	(G-AEP ONLY)...CERAMIC CHIP	30PF	5%	50V
C6	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C7	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C8	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C9	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C10	1-163-085-00	CERAMIC CHIP	2PF	0.25PF	50V
C11	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C12	1-163-468-91	CERAMIC CHIP	12PF	5%	50V
C13	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C14	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C15	1-124-231-91	ELECT	4.7MF	20%	16V
C16	1-163-205-00	CERAMIC CHIP	0.001MF	10%	50V
C17	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C18	1-124-220-00	ELECT	33MF	20%	4V
C19	1-162-638-11	CERAMIC CHIP	1MF		16V
C20	1-124-231-91	ELECT	4.7MF	20%	16V
C21	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C22	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C23	1-163-195-00	CERAMIC CHIP	390PF	5%	50V
C24	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C25	1-163-064-00	CERAMIC CHIP	0.027MF	10%	50V
C26	1-163-064-00	CERAMIC CHIP	0.027MF	10%	50V
C27	1-124-231-91	ELECT	4.7MF	20%	16V
C28	1-124-231-91	ELECT	4.7MF	20%	16V
C29	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C30	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C31	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C32	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C101	1-163-205-00	CERAMIC CHIP	0.001MF	10%	50V
C103	1-124-224-00	ELECT	47MF	20%	6.3V
C104	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C105	1-124-231-91	ELECT	4.7MF	20%	16V
C106	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C107	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C108	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C201	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C202	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C203	1-124-224-00	ELECT	47MF	20%	6.3V
C204	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C205	1-124-231-91	ELECT	4.7MF	20%	16V
C206	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C207	1-163-009-00	CERAMIC CHIP	0.001MF		
C208	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C301	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C302	1-124-225-00	ELECT	100MF	20%	6.3V
C303	1-124-225-00	ELECT	100MF	20%	6.3V
C304	1-124-434-00	ELECT	220MF	20%	4V
C305	1-124-434-00	ELECT	220MF	20%	4V
C306	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C307	1-124-231-91	ELECT	4.7MF	20%	16V
C308	1-163-009-00	CERAMIC CHIP	0.001MF	10%	50V
C309	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C310	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C311	1-163-009-00	CERAMIC CHIP	0.001MF		
C312	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C601	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C602	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
CF1	1-527-958-91	FILTER, CERAMIC (AM IF)			
CF2	1-527-870-00	FILTER, CERAMIC (AM IF)			
CF2	1-567-129-11	FILTER, CERAMIC (AM IF)(UK ONLY)			
CNJ301*1-563-318-11		SOCKET, CONNECTOR(PC BOARD) 8P			
CNJ302*1-563-317-11		SOCKET, CONNECTOR(PC BOARD) 4P			
CNJ303*1-563-350-11		CONNECTOR, F.P.C 3P			
CNP301*1-506-790-11		PIN, CONNECTOR (PC BOARD) 8P			
CNP302*1-506-789-11		PIN, CONNECTOR (PC BOARD) 4P			
CP1	1-235-171-00	FILTER, BAND PASS			
D1	8-719-104-23	DIODE 1SS123-T2			
HP301	1-543-339-11	HEAD MAGNETIC (PLAY BACK)			
IC1	8-759-204-03	IC TA7358AP			
IC2	8-759-207-26	IC TA8110P			
IC3	8-759-205-81	IC TA7370P			
IC301	8-759-802-85	IC LA4570			
IC601	8-759-403-65	IC AN6650-LF			
J301	1-507-723-00	JACK, EXTENTION POWER			
J302	1-563-316-11	JACK, HEADPHONES			
L1	1-459-653-11	COIL (WITH CORE)			
L1	1-459-679-11	COIL (WITH CORE)(G-AEP ONLY)			
L2	1-459-654-11	COIL (WITH CORE)			
L2	1-459-680-11	COIL (WITH CORE)(G-AEP ONLY)			
L3	1-406-221-11	ANTENNA, FERRITE-ROD (MW)			
L4	1-406-208-41	COIL (OSC)			
M301	8-835-186-01	MOTOR, DC			

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q1	8-729-201-26	TRANSISTOR 2SC2715			
Q101	8-729-900-51	TRANSISTOR DTA114TK			
Q201	8-729-900-51	TRANSISTOR DTA114TK			
Q302	8-729-200-73	TRANSISTOR 2SA1162			
Q303	8-729-903-10	TRANSISTOR FMW1			
● R1	1-247-807-00	CARBON	100	5%	1/6W
● R2	1-247-795-00	CARBON	33	5%	1/6W
● R3	1-247-887-00	CARBON	220K	5%	1/6W
● R4	1-247-819-00	CARBON	330	5%	1/6W
● R5	1-247-831-00	CARBON	1K	5%	1/6W
● R6	1-247-845-00	CARBON	3.9K	5%	1/6W
● R7	1-247-835-00	CARBON	1.5K	5%	1/6W
● R8	1-247-853-00	CARBON	8.2K	5%	1/6W
● R9	1-247-831-00	CARBON	1K	5%	1/6W
● R10	1-247-857-00	CARBON	12K	5%	1/6W
● R11	1-247-865-00	CARBON	27K	5%	1/6W
● R12	1-247-844-00	CARBON	3.6K	5%	1/6W
● R13	1-247-844-00	CARBON	3.6K	5%	1/6W
● R14	1-247-807-00	CARBON	100	5%	1/6W
● R15	1-247-855-00	CARBON	10K	5%	1/6W
● R16	1-247-831-00	CARBON	1K	5%	1/6W
● R17	1-247-879-00	CARBON	100K	5%	1/6W
● R101	1-247-809-00	CARBON	120K	5%	1/6W
● R102	1-247-845-00	CARBON	3.9K	5%	1/6W
● R103	1-247-847-00	CARBON	4.7K	5%	1/6W
● R104	1-247-883-00	CARBON	150K	5%	1/6W
● R105	1-247-807-00	CARBON	100	5%	1/6W
● R106	1-247-807-00	CARBON	100	5%	1/6W
● R201	1-247-809-00	CARBON	120K	5%	1/6W
● R202	1-247-845-00	CARBON	3.9K	5%	1/6W
● R203	1-247-847-00	CARBON	4.7K	5%	1/6W
● R204	1-247-883-00	CARBON	150K	5%	1/6W
● R205	1-247-807-00	CARBON	100	5%	1/6W
● R206	1-247-807-00	CARBON	100	5%	1/6W
● R301	1-247-849-00	CARBON	5.6K	5%	1/6W
● R304	1-247-873-00	CARBON	56K	5%	1/6W
● R305	1-247-845-00	CARBON	3.9K	5%	1/6W
● R306	1-247-873-00	CARBON	56K	5%	1/6W
● R307	1-247-831-00	CARBON	1K	5%	1/6W
● R308	1-247-807-00	CARBON	100	5%	1/6W
● R309	1-247-807-00	CARBON	100	5%	1/6W
R601	1-216-194-00	METAL CHIP	680	5%	1/8W
R602	1-216-135-00	METAL CHIP	2.4	5%	1/8W
R603	1-216-135-00	METAL CHIP	2.4	5%	1/8W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
RV1	1-230-881-11	RES, ADJ, CARBON 10K(MPX VCO)
RV101	1-230-485-21	RES, VAR, CARBON 10K/10K (VOLUME)
RV601	1-237-130-11	RES, ADJ, CARBON 470(SPEED ADJ)
S301	1-570-659-11	SWITCH, SLIDE (TAPE/AM ATT)
S302	1-570-660-11	SWITCH, SLIDE (FUNCTION)
S303	1-570-549-11	SWITCH, LEAF (MOTOR)
T1	1-404-680-41	TRANSFORMER, IF
T2	1-404-679-41	TRANSFORMER, IF
T3	1-404-678-41	TRANSFORMER, IF
T301	1-409-414-41	COIL, TRAP
TH601	1-807-488-11	THERMISTOR (POSITIVE)
TH602	1-807-489-11	THERMISTOR (POSITIVE)

ACCESSORY & PACKING MATERIAL

Part No.	Description
3-527-213-00	LABEL, SERIAL NUMBER (PRINTER)
3-527-213-00	LABEL, SERIAL NUMBER
3-765-281-12	(WM-F31)..... MANUAL, INSTRUCTION
3-765-281-22	(WM-F41)..... MANUAL, INSTRUCTION
3-765-281-32	(WM-F41 : Canadian)....MANUAL, INSTRUCTION
3-765-281-41	(WM-F31 : AEP)..... MANUAL, INSTRUCTION
3-765-652-31	(WM-F41SS)..... MANUAL, INSTRUCTION
3-795-748-21	SAFETY INSTRUCTIONS, HEADPHONE
8-952-268-90	HEADPHONE MDR-010L SET
X-3334-010-1	CASE ASSY, CARRYING

●: This set equips "PRINTING RESISTOR" in the circuit. When repairing, replace "PRINTING RESISTOR" with conventional "CARBON RESISTOR" refer to the electrical parts list.